

AMENDMENTS TO THE CLAIMS

Please delete the heading before claim 1 and insert the following new paragraph:

The invention claimed is:

1. (Currently Amended) A method of maximising the fault coverage on an integrated digital circuit by re-ordering a number of test vectors for testing the digital circuit, said method comprising :

- a) providing an initial set of test vectors T_0 ;
- b) providing an original set of faults F_0 ;
- c) selecting faults at random from the original fault list to form a sample fault list

F_N ;

- d) forming a vector set T_{N-1} and simulating the vector set T_{N-1} against fault list

F_N ;

- e) discarding any vector from the vector set T_{N-1} which does not detect any faults; ~~and~~

- f) saving the remaining vectors as vector set $T_N[[]]$;

g) repeating the above steps a) to e) c) to f) N times with N having a value of 1 to M so that at the end of [[N]] M steps, saving test vectors T_0 vector sets T_1 to T_M are saved;

- [[g]] h) removing duplicate vector patterns in each vector set $T_N[[]]$; and

[[h]] i) saving the duplicate free vector set V_N with N having a value 1 to M,
initialising the final vector set and appending vector sets V_M ~~to~~ through V_0 to produce a final vector set T_F .

2. (Currently Amended) A method as claimed in claim 1 wherein in ~~steps a) to f)~~ step g) M is 10 and ~~these steps c) to f)~~ are therefore repeated ten times.

3. (Original) A method as claimed in claim 1 wherein the list of faults selected from the original list of faults have a probability of X^{-N} to produce subset fault list F_N .

4. (Original) A method as claimed in claim 2 wherein the list of faults selected from the original list of faults have a probability of X^{-N} to produce subset fault list F_N .

5. (Original) A method as claimed in claim 3 wherein $X=2$.

Al 6. (Currently Amended) A method as claimed in claim 1 wherein the step of removing duplicate vector patterns is achieved by :

[[i]] j) copying the original fault list F_O to provide a secondary fault list $[[G_O]] \underline{G_N}$;

[[j]] k) fault simulating vector set T_N against G_N and deleting any vectors which find no faults;

[[k]] l) saving the resulting vectors as vector set V_N and saving the list of undetected faults as list G_{N-1} ;

[[l]] m) repeating ~~step g) to i)~~ steps k) and l) M+1 times with N having values M to 0[[;]].

7. (Original) A method as claimed in claim 1 wherein the step of removing duplicate vector patterns is achieved by conducting a text search through the list of files of

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al vector patterns looking for identical patterns, identifying the identical patterns and deleting the identical patterns identified.
